CONNERTON

Fine Cooking Equipment For Over 70 Years

Installation, Operation & Maintenance Instructions

MODEL A-4F OVER/UNDER BROILER

For Your Safety

Do NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this, or any other appliance.

Warning!

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

To Purchaser

After installation of your broiler, immediately contact your local gas supplier to obtain information in the event the user of your equipment smells gas. This information must be posted in a prominent location.

To User

RETAIN THIS MANUAL FOR FUTURE USE

Upon receipt of this broiler, inspect it thoroughly for any damage which may have occurred during shipment. If damage is observed, contact the delivery agency immediately.

1. **Preparation For Installation:** Safe and satisfactory operation of the broiler depends, to a great extent, upon it's proper installation. It should be installed in accordance with the National Fuel Gas Code **Z223.1**, these instructions, and applicable State and Local Codes.

   Installation must be made by a licensed plumber.

   Initial setup must be made by a licensed service company.

   A gas pressure regulator is supplied with your broiler. The regulator must be installed before connecting broiler to gas supply line. *Please note: air vent can plug with grease, thereby shutting gas supply off. Install regulator in a drip-free area.*

   The broiler and it's individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45 kPa).

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Ceramic radiants are boxed and placed in grease pan for shipment. Remove top griddle plate and carefully place them over top burners like a saddle.

2. **Clearances And Ventilation:** This appliance is design certified for installation on combustible floors and adjacent to combustible walls. Minimum clearance from combustible construction; 6 inches from side and 6 inches from back. 0 inch clearance sides and back for non-combustable locations.

   Keep broiler area free and clear from combustibles.

   The area in front of, and above the broiler must be clear to avoid obstruction of flow of combustion and ventilation air. Means must be provided for adequate air supply and adequate clearance for air openings into the combustion chamber.

   Adequate clearances must be provided in front and sides of the broiler for servicing and proper operation.

   It is important that the broiler be installed under an exhaust hood which is adequate to remove the products of combustion and cooking vapors. Sufficient make-up air must also be provided to the space where the broiler is located to replace air removed through the exhaust hood.

3. **Gas Piping:** Make sure the gas pressure regulator supplied with the broiler is installed correctly, with the arrow pointing toward the broiler. Connect outlet side of regulator to broiler. The regulator is set at 4 inch w.c. on natural gas and 11 inch w.c. on propane gas. A 1/8" pressure tap is provided on the gas manifold at the front of the broiler for checking the gas pressure. **Please note: air vent on regulator can plug with grease, thereby shutting gas supply off. Install regulator in drip-free area.**

   Connect broiler to the gas supply line. Under no circumstances should the gas supply line be smaller than the inlet pipe on the broiler. A gas shutoff valve must be installed in the gas supply line upstream of the broiler for complete shutdown and service. Use pipe sealant on all pipe joints. Sealant must be resistant to the action of L.P. gasses.

   For proper performance, the broiler must be level. Adjusting feet are provided at the bottom of the legs. Carefully level the broiler using "bubble" type level on top plate.

   If the broiler is supplied with casters, the installation must be made with a connector that complies with the Standard for Connectors For Moveable Gas Appliances ANSI Z21.69, and a quick-disconnect device that complies with the Standard For Quick-Disconnect Devices For Use With Gas Fuel ANSI Z21.41. Adequate means must be provided to limit the movement of the broiler without depending on the connector and the quick-disconnect device or it's associated piping to limit the broiler movement. Restraining device should be connected to legs or back of body.

   IMPORTANT: Check all gas connections for leaks, using a soap and water solution.

   DO NOT USE AN OPEN FLAME FOR CHECKING PURPOSES

4. **Lighting And Relighting Of Broiler:**

   A. Turn gas valve and thermostat knob(s) located at the front of the broiler to "OFF". Wait 5 minutes.

   B. Turn valve knobs marked lower to "ON". Note: thermostat remains "OFF".

   C. Turn pilot lighter valve adjusting screw(s) counterclockwise and light pilots. Adjust flame height to approximately ¼".

   D. To light top burners, turn valve knobs marked upper to "ON". To light bottom burners, turn thermostats to desired temperature.

   E. For complete shutdown, turn all gas valve knob(s) to "OFF" and turn pilot adjustment screw(s) clockwise to shut off all gas supply to pilot light(s).

   F. To relight, repeat above procedures.

5. **Care And Maintenance:**

   Contact Factory, factory representative, or a local service company to perform maintenance and repairs. **Please Note: Contact Factory before any warranty repairs are made.**

Operator Notes:

1. Flexible Gas Line: To prolong the life, it is important that the flexible gas line is not twisted or bent while installing same. Carefully follow instructions, using two wrenches. Also, do not operate broiler with the inner track pulled out, as this will cause excessive wear and breakage of the flexible gas line.

2. Roller Bearings: Lubricate rollers every other day. To prolong life, once a year the entire mechanism should be disassembled and all bushings be cleaned and re-greased.

3. Thermostat: The thermostats can go out of calibration and should be checked periodically with a surface thermometer.

4. Pressure Regulator: If there is no gas, the pressure regulator is possibly frozen closed, or the vent is plugged. (Refer to section on preventative maintenance.) If this does not free the diaphragm and allow the gas to flow through, the pressure regulator must be replaced.

5. Cleaning:

(See section on preventative maintenance for detailed cleaning procedures.)

A. To clean griddle plates, place a small amount of water on griddle while hot with long-handled pot brush. (**DO NOT USE ICE**.)

B. Remove stainless steel liners for cleaning.

C. Lift out grease chute from inside to clean.

D. Periodically (but not sooner than every 3 months) clean broiler burner ports and orifices. (**Note: Make sure equipment is cold before removing.**)

E. Empty grease pan and clean broiler drawer. Follow these instructions to remove broiler drawer.

1. Disconnect flexible gas connector from thermostat. Carefully hold inside hex nut with wrench to avoid any bending or torquing of flexible line.

2. Remove front bolt from bar on inner track that assembly rolls on.

3. Pull inner track out to rear stop bolt.

4. Lift off broiling griddle from drawer.

5. Lift out broiler drawer through slots cut in inner track.

6. Clean and replace in reverse order. Grease track with high-temp grease.

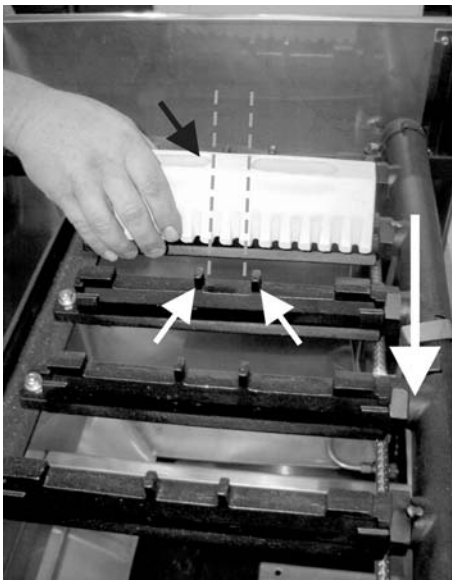
6. Cooking:

1. This is a broiler/griddle combination unit. The heat from the bottom broiler burners combined with the radiated heat from the top burners cook the product simultaneously from the top and bottom while the broiler drawer is in the “up-and-in” position for red meat, lower for chicken, fish and pork.
2. The broiler griddle/drawer moves in and out easily on heavy duty roller bearings for loading and unloading. It is spring balanced for easy movement up and down; automatically stays in chosen position
3. For optimal griddle operation, turn on griddle 30 minutes prior to use.
4. Set the top burner flame at 1/2 throttle using both the left and right side manual control knobs. Set higher if radiants do not glow red.
5. Ensure that the flames are blue in color. (Slight orange flickering is normal, but yellow flame indicates improper gas combustion. Yellow tips on blue flames are considered acceptable.)
6. Put the bottom grill plate in the down-and-in position, and set the thermostat control knob to 350º.
7. When not cooking, the drawers must be kept in the down position. It is very important to keep the temperature of the bottom grill plate below 450º. If the drawer is in the up-and-in position while idle, the grill surface can reach 650º, creating hot spots as well as producing a tough meat product.
8. When turning the bottom grills on or off, use the thermostat control knob. The lower control valves are used only for complete gas shut-off. The top burner heat temperature is controlled by the left and right control valve knobs.

Installing Radiants:

1. Carefully remove radiant from it's shipping container. *Radiants are made from ceramic material and are easily chipped or broken.*
2. Position radiant over top burner, lower radiant onto burner, aligning holes in the top of the radiant with the tabs extending from the burner.
3. Check radiant to make sure that it is centered and resting on top of the burner, held in position by the tabs on the burner.

NOTE: DO NOT FORCE RADIANT ONTO BURNER. This will cause the radiant to break. If the radiant does NOT fit gently onto burner, contact the Factory or your factory representative.



Installing Bottom Griddle Plate:

1. Position bottom griddle plate onto drawer frame with grease chute facing rear of broiler.

PREVENTATIVE MAINTENANCE

Overview:

Daily:

Grease chute must be kept clear and clean.
Clean griddle surfaces with grill screens and/or 3M-type coarse blending or cleaning pad.
Remove stainless steel side and back liners, clean and replace.
Drain and clean the grease pan.

Weekly:

Check thermostat calibration with surface thermometer. Contact local service company for calibration, if necessary.

Monthly:

Disassemble grill, clean and reassemble the following parts:

Top lighter tubes
Flexible gas connector (inside grill)
Bottom drawer (remove from grill)
Griddles (top and bottom)
Inner track
Drip Spout

- Check leveling rods.
- Check drawer level (1/16" - 1/8" down in back)
- Check spring tension on bottom drawer - grill should easily return to 'up' position.
- Check detent assemblies - listen for 'clicking' sound as detent ball engages at each stop position as drawer is moved up or down.

Daily Preventative Maintenance:

Grill screens and 3M-type cleaning pads are the only recommended method of cleaning the grills. With repeated use they will smooth the surface of the grill, making cleaning easier.

Grill bricks are *NOT* recommended for use on the grills as they give a rough grill surface which causes faster carbon buildup, resulting in the product sticking to the grill surface. The black residue from the grill bricks is also transferred to the product, thus compromising quality.

Do not use corrosive cleaning agents on the grill. They may appear to work well on the top of the grill surfaces, but they also destroy the interior walls of the grill, including the brackets that hold the shields and chutes in place. Use mild to moderate degreasers only.

Cleaning the Grill: Use the following instructions for cleaning the grill:

1. Turn off grills and wait 15 minutes before cleaning.
2. Wet the grill surface with a small amount of water, or properly diluted soap solution if necessary. Scrub the grill surface with a grill screen and/or grill pad using a left-to-right motion, to remove almost all of the carbon buildup. NOTE: Never use ice on the grill surfaces as it will cause the grill plate to warp. Clean lower grill in down and out position.
3. Wipe the grill surface with a towel.
4. Take a second DRY grill screen and scrub the grill surface again. This dry grill screen procedure removes any remaining carbon buildup and polishes the grill surface.
5. Using a sharp-edged scraper, scrape any carbon buildup from the side and back walls that surround the grill surface.
6. If available, wash the interior cavity of the grill using a hot water hose (Do not use water on the inside when the grill is hot). Do not use the spray nozzle on the hose because splashing will damage the top burner ceramic radiants.
7. Drain the drip pans, clean and replace them
8. Wash all front exterior surfaces using a diluted soap solution. Rinse with water and let dry.

Monthly Preventative Maintenance:

Checking Leveling Rods:

There are two leveling rods that adjust each lower griddle plate. Each rod has two adjusting nuts at the top end, just behind the face plate of the bottom grill.

The lower nut adjusts the pitch of the back of the grill, and the upper nut tightens to secure the firm tension of the leveling rod. The rods must *NOT* be lose.

Checking the lower grill plates:

To check the lower grill plates, use the following steps:

1. Put the bottom grill in the up-and-in position.
2. Mark the level of the bottom grill at the front.
3. Pull the bottom grill out and mark the level of the grill at the back.

The difference between the two marks should not exceed 1/8". If the difference is not within this range, adjust the leveling rods as described above.

Checking the Spring Tension of the Bottom Grills:

The spring tension regulates the ability of the drawer mechanism to lift the weight of the bottom griddle plate. Difficulty of upwards movement indicates that spring tension must be increased. Difficulty of downward movement indicates spring tension must be reduced.

To increase spring tension, tighten the nuts at the end of the threaded 'J' hook at the end of the spring, thus extending the spring and increasing spring tension. To decrease spring tension, loosen the nuts. NOTE: Make equal adjustments to BOTH springs to prevent unbalanced tension.

Checking the Detent Assembly:

The detent assembly regulates the full down and in-between settings before full up position is reached. There is one detent assembly on each side of the mechanism support arms. Each assembly consists of a steel ball bearing, spring, retaining bolt and lockdown nut. Check to insure that the depressions in the detent plate are clean and free of deposits so that the ball bearing can roll in and out.

Screwing in the bolt increases compression on the spring which in turn increases pressure on the ball bearing. Adjust spring compression by loosening lockdown nut and tightening the retaining bolt until a forceful 'clicking' is heard as the ball bearing rides in and out of the detent plate depressions. Tighten lockdown nut when satisfactory pressure is achieved. Adjust both detent assemblies to equal compression for best operation.

Periodic Maintenance:

Radiants:

Verify that the radiants are glowing red. If not, the grill is not being used efficiently. Check flame color and length. Flame tips should reach the end of the edge of the radiant fingers. Replace any broken radiant when 2 or more fingers in a row are broken or missing. NOTE: Broken fingers will lead to plugged burner ports.

Orifices:

2 orifice caps are used for the top burner assembly, 10 orifice caps are used for the bottom burner assembly.

The orifice caps must be kept clean. To clean the orifices, use the following guidelines:
Remove the orifices to clean them. Clean hole in orifice hood with a toothpick from the inside to the outside, being careful not to break the toothpick off inside the orifice. If cleaned while installed on orifice assembly, grease will be pushed into the hood and will eventually re-plug the hole. Brass is an extremely soft metal, and a paperclip or other harder, abrasive tool can easily enlarge the orifice diameter leading to possible hazardous conditions.

Air Shutters:

The air shutters are located at the end of the top burner manifold and the ends of the broiler burners. They are used to regulate the air/fuel mixture.

Typical adjustment range:

Top burners: 1/2 - 3/4 open (On top burner manifolds)
Bottom burners: 3/4 open

Insufficient air (shutter not open enough) results in longer blue to yellow flame. **NOTE: this is a fuel-rich setting that can produce excessive carbon monoxide.** Excessive air (shutter open too far) results in sharp translucent blue flame to flame that lifts off burner ports.

Pilot Flame:

When the pilot flame burns out beyond the lighter tube (bottom griddle), reduce the flame so that the flame is touching and slightly around the lighter tube. The adjusting screw is on the gas supply line between the thermostat and the pilot assembly itself. The pilot adjusting valves for the top lighter tubes are found on the main gas manifold at the base of the unit.

Top Burners:

Clean top burners using the following steps:

1. Scrub thoroughly with a wire brush.
2. Use a #49 drill (or drill sized as close as possible without over-sizing) to re-open ports to their original size (or as close as possible). Note: Over-sizing ports will cause improper operation resulting in poor performance of the grill.

Ceraform Fiber Board:

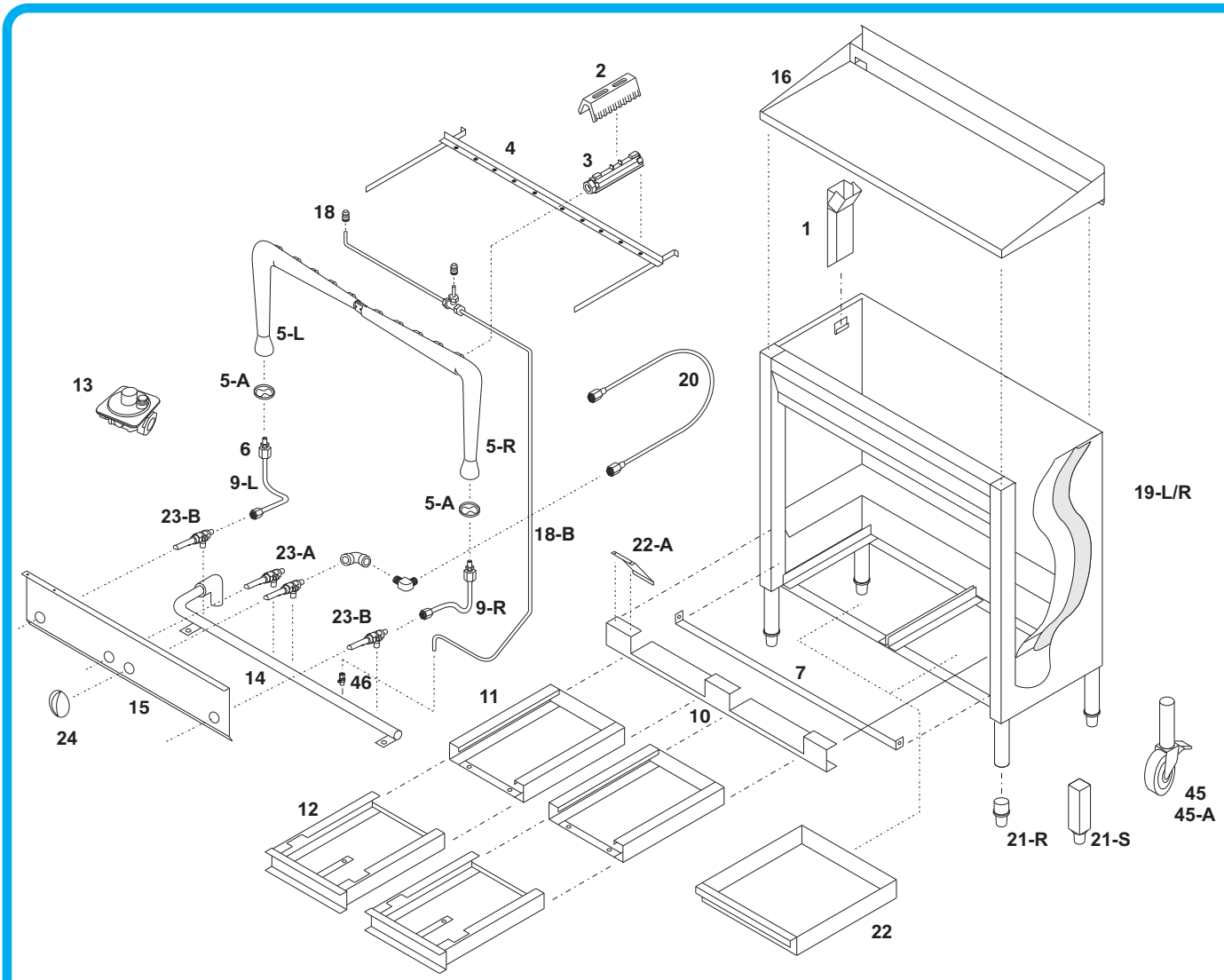
Ceraform is a non-asbestos fiber board. It keeps the top griddle plate from getting too hot. It can be damaged by water and/or by scraping it across the top of the cabinet when removing or replacing the top griddle plate.

Inner and Outer Track Assemblies:

The inner track uses a bolt to hold it in place. Remove and replace for monthly cleaning and greasing of the track. Removal of the bolt while in use will cause the track to slide out and cause excessive wear on both the track and the flexible gas connector. The safety bolt is to be removed ONLY for full cleaning of the tracks and then replaced.

Gas Pressure Regulator:

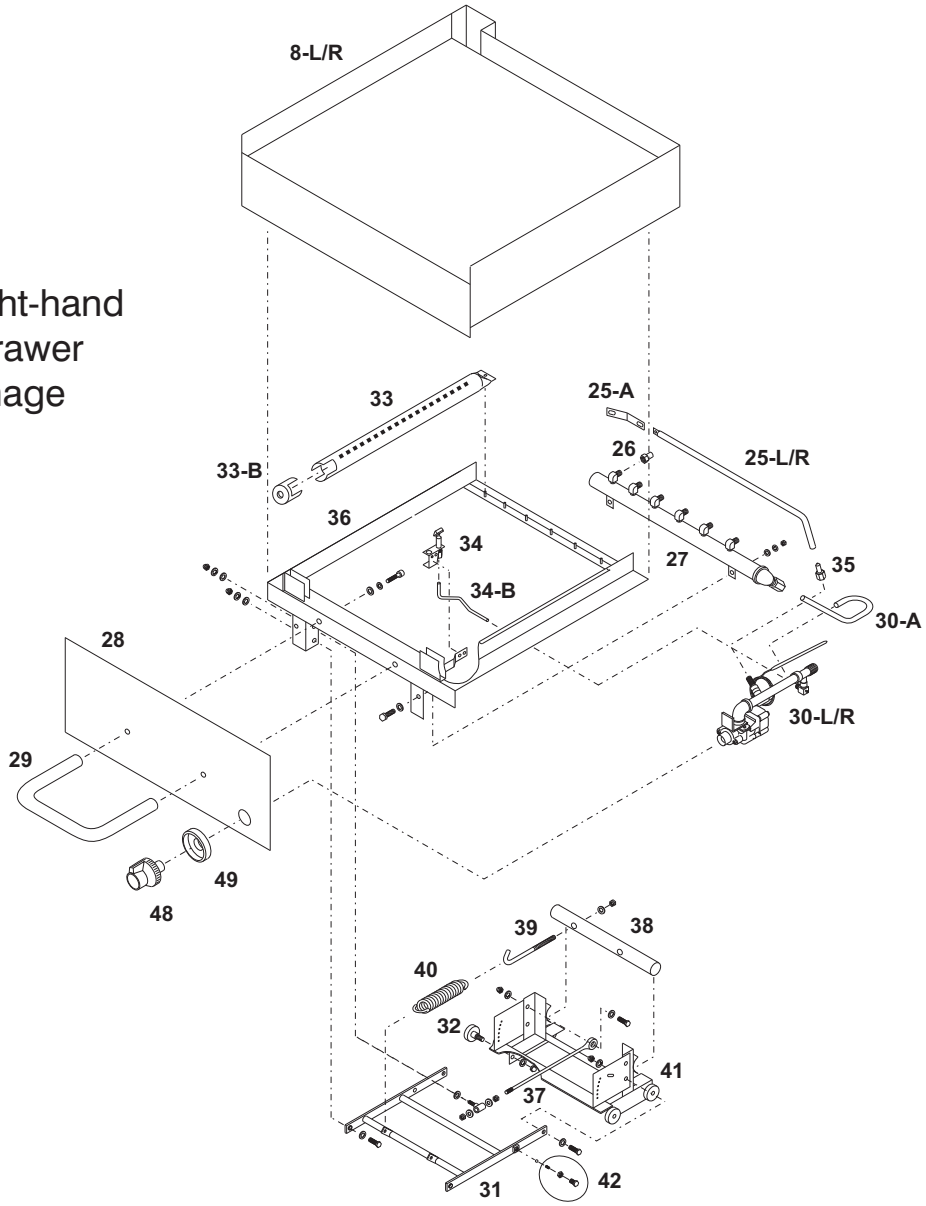
If there is little or no gas in the burners, the vent hole on the regulator is possibly plugged with grease. To prevent the vent hole from plugging, cover the regulator **lightly** with aluminum foil. The regulator should be installed on the main gas line between the grill and shut-off valve. Regulator should be placed in a location that will minimize grease exposure.



Model A-4F Parts List

1	Grease Drip Spout
2	Ceramic Radiant
3	Top Burner
4	Back Support Bar
5-L	Top Manifold (Left)
5-R	Top Manifold (Right)
5-A	Manifold Air Mixer
6	Top Orifice Assembly
7	Valve Bar
9-L	Gas Supply Tubing (Left)
9-R	Gas Supply Tubing (Right)
10	Track Support
11	Outer Track
12	Inner Track
13	Gas Pressure Regulator
14	Primary Gas Manifold
15	Control Panel
16	Top Griddle Platel
17	Removable Back Liner
18	Top Pilot Assembly
18-B	Top Pilot Tubing Complete
19-L/R	Removable Side Liner
20	Flexible Gas Connector
21-R	Adjustable Foot Insert (Round)
21-S	Adjustable Foot Insert (Square)
22	Grease Drip Pan
23-A	Manual Valve (1/4 p)
23-B	Manual Valve (1/2 cc)
24	Chrome Valve Knob
45	Pop-in Swivel Caster
45-A	Stud Caster
46	Pilot Adjustment Valve

Note: right-hand broiler drawer mirror image



Model A-4F Parts List (Cont.)

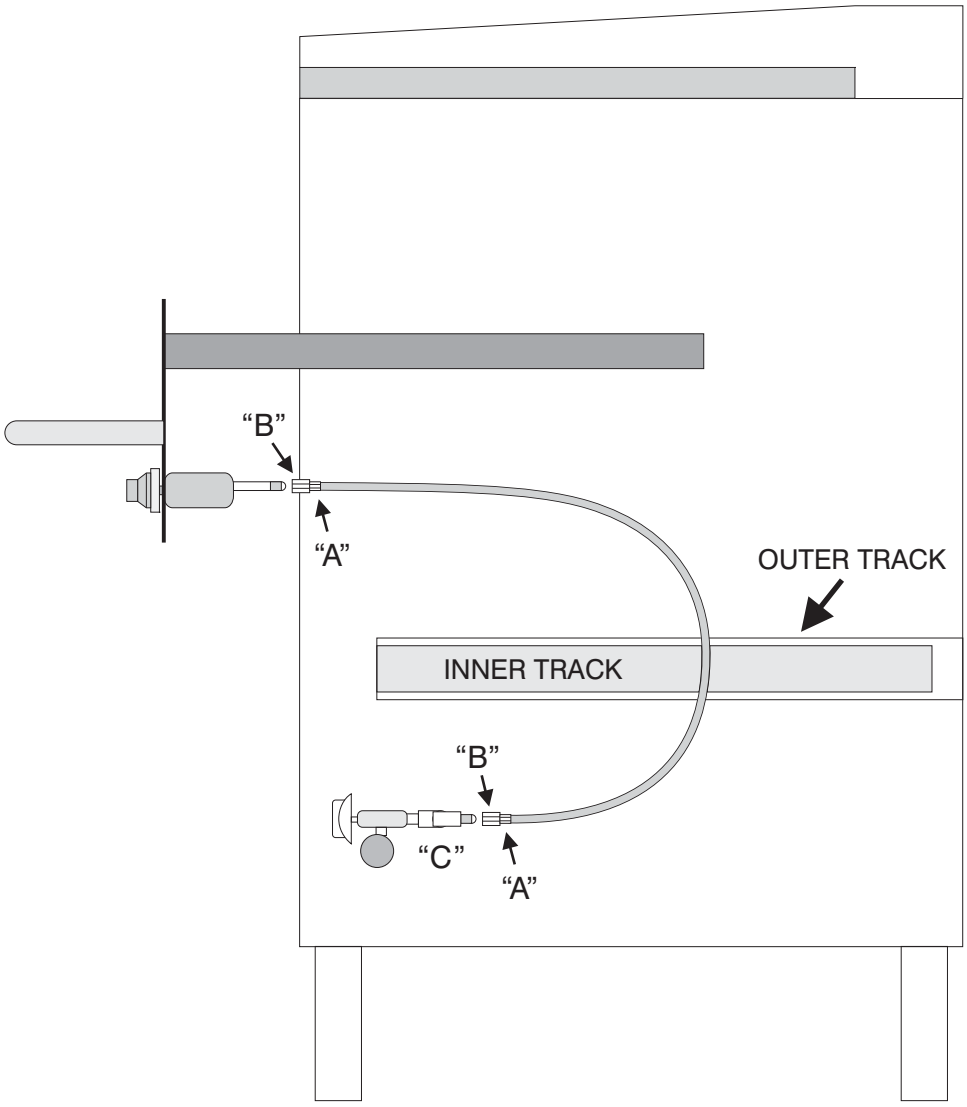
8-L/R	Bottom Griddle Plate
25-L	Bottom Carryover Tube (Left)
25-R	Bottom Carryover Tube (Right)
25-A	Carryover Tube Bracket
26	Bottom Burner Orifice Hood
27	Bottom Manifold with Orifices
28	Mechanism Trim Panel
29	Mechanism Drawer Handle
30-L	Thermostat with Fittings (Left)
30-R	Thermostat with Fittings (Right)
30-A	Tubing for Thermostat
31	Support Arm
32	Roller Bearing
33	Bottom Burner
33-B	Air Shutter
34	Bottom Pilot
34-A	Orifice for Pilot
34-B	Tubing for Bottom Pilot
35	Carryover Tube Orifice
36	Bottom Griddle Support Frame
37	Leveling Rod
38	Axis Shaft
39	Spring Adjustment Rod
40	Mechanism Spring
41	Carriage Assembly
42	Detent (Ball/Spring/Bolt)
48	Thermostat Knob
49	Thermostat Bezel

FLEXIBLE GAS CONNECTOR INSTRUCTIONS

To prolong the life of your flexible gas connector, it is important that the following instructions be precisely adhered to.

The connector is provided with hex-shaped fittings on each end. Fitting ‘A’ should be held firmly with a wrench and not allowed to turn while a second wrench is used to tighten fitting ‘B’. The threaded fasteners, ‘C’, must always be in a horizontal position, pointing to the rear of the unit. The connector should be in a smooth U-shape with upper and lower portions being parallel when moved in any direction.

IMPORTANT: At no time should the inner track be pulled outward from the original position while the connector is attached.



TROUBLESHOOTING GUIDE

Condition	Probable Cause	Solution
Small/no burner flame	Regulator failure	Unplug regulator vent hole or replace regulator.
	Plugged orifice cap	Unplug hole with toothpick or replace orifice.
	Plugged burner port	Unplug burner port(s).
No top burner flame	Gas orifices	Unplug orifice hole with toothpick or replace orifice.
No bottom burner flame	Thermostat	Check calibration and by-pass setting; recalibrate or replace.
Small/no pilot flame	Adjustment valve setting	Adjust flame height.
	Plugged pilot orifice	Clean or replace orifice.
Yellow burner flame	Improper air shutter setting	Increase air shutter setting until flame is blue.
	Enlarged orifice	Replace with correct orifice.
Flame lifts off burner	Improper air shutter setting	Decrease air shutter setting until flame sits on burner.
	Plugged orifice	Unplug orifice hole or replace orifice.
Top griddle too hot	Insulation board failing	Replace insulation board.
	Top burners set full open	Change burner setting to a lower acceptable level.
Drawer griddle too hot	Thermostat by-pass	Adjust by-pass setting.
	Thermostat calibration	Re-calibrate thermostat.
	Top burner set full open	Change burner setting to a lower acceptable level.
	Drawer griddle is in up position when not cooking	Lower drawer when not cooking; out if possible.
Drawer griddle too cold	Thermostat calibration	Re-calibrate thermostat.
	Thermostat by-pass	Adjust by-pass setting.
Bottom drawer not easily rolling	Grease/food matter	Clean inner and outer track and carriage assembly with a degreaser. Remove food matter.
		Clean and re-oil roller bearings.
Bottom drawer hard to lift to up position	Spring tension too loose	Tighten spring adjustment rod until drawer can be lifted up with one finger.

TROUBLESHOOTING GUIDE (cont.)

Condition	Probable Cause	Solution
Bottom drawer hard to Push to down position	Spring tension too tight	Loosen spring adjustment rod until drawer can be pushed down with one finger.
Bottom drawer does not remain in middle positions	Detent setup	Clean detent plate depressions, ball bearings and springs. Replace with new parts if necessary.
Bottom griddle not level	Leveling rod setting	Adjust left and right side rods evenly, top nut first then bottom nut, until pitch drops 1/8” in rear.
Top griddle not level	Broiler has not been setup properly.	Adjust bullet feet inserts until broiler is level from side to side, and from front to rear.

LIMITED WARRANTY

The Connerton Company warrants to the original user for a period of one year from date of installation, not to exceed 18 months from date of shipment by Connerton, that the equipment manufactured is free from defects in material or workmanship.

Our obligation under this warranty shall be limited to furnishing without charge any part of said product which, upon examination by The Connerton Company shall prove to be defective. Parts wear is not considered a defect. The Connerton Company will not be responsible for labor or transportation charges incidental to the replacement of same.

The Connerton Company assumes no responsibility for failure of the equipment to operate properly due to improper installation or operation. This warranty applies to all equipment that has been unaltered, properly installed and maintained in accordance with national and local codes and in accordance with the installation and operating instructions included with this equipment.

This warranty does not extend to normal maintenance items, including but not limited to, thermostatic calibrations, air and gas adjustments and adjustments to pilot flames. Proper installation, adjustments, calibration and initial checkout is the responsibility of the dealer, the owner-user or installer and not that of The Connerton Company.

Exceptions to warranty:

1) Flexible gas connectors that are bent or twisted due to improper installation or operation and/or modifying the location of fittings that the tube is connected to.

Please fill out and refer to the following when contacting the factory:

Model # A-4F **Serial#** _____ **Gas Type:** _____ **Purchase Date:** _____